



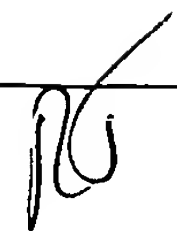
UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,913	07/15/2003	Anand Huprikar	12163	7163
28484	7590	10/07/2004	EXAMINER	
BASF CORPORATION LEGAL DEPARTMENT 1609 BIDDLE AVENUE WYANDOTTE, MI 48192			NGUYEN, XUAN LAN T	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/619,913	Applicant(s) HUPRIKAR ET AL. 	
	Examiner Lan Nguyen	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 27-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 18-24, 27-35 and 38-47 is/are rejected.
- 7) ☒ Claim(s) 12-17, 36 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 38 is objected to because of the following informalities: "said ledge and said second portion" should be --said ledge of said second portion --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 27 depends on cancelled claim 26. Claim 27 is being treated as depending on claim 20.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6, 9-11, 18, 19, 31, 32, 34, 38-42 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Tondato.

Art Unit: 3683

Re: claims 1 and 2, Tondato shows a mounting assembly for a wheel suspension system of a vehicle having a vehicle body, as in the present invention, said mounting assembly comprising: a support structure 200, 7, as marked on the illustration below, for the sake of convenience, the Examiner has assigned number 200 to one member of the support structure, having an aperture and adapted to be mounted to the vehicle body; a piston rod 6 at least partially disposed within said aperture and displaceable relative to said support structure along a line of travel; a plate 23 mounted to said piston rod, and moving relative to said support structure during said displacement of said piston rod 6; and an insulator 13 disposed between said support structure 200, 7 and said plate 23 with said insulator 13 substantially surrounding said piston rod and abutting said plate 23 for coupling said piston rod 6 to said support structure 200, 7; said insulator 13 having a first portion 201, as marked below with number 201, defining a first resistance for isolating said displacement of said piston rod and said plate during an application of a first force along said line of travel in a first direction, which at least partially compresses said first portion, and a second portion 202, as marked below with number 202, defining a second resistance with said second resistance being greater than said first resistance for controlling said displacement of said piston rod and said plate after said application of said first force and during an application of a second force along said line of travel in said first direction, wherein said second force is greater than said first force such that said first portion is compressed before the second portion is compressed. Note that first portion 101 is a thinner doughnut shape than second portion 202. Due to this structure, the first portion inherently would define a first

Re: claims 31 and 32, Tondato shows a mounting assembly for a wheel suspension system of a vehicle having a vehicle body, as in the present invention, said

Art Unit: 3683

mounting assembly comprising: a support structure 200, 7, as marked on the illustration below, for the sake of convenience, the Examiner has assigned number 200 to one member of the support structure, having an aperture and adapted to be mounted to the vehicle body; a piston rod 6 at least partially disposed within said aperture and displaceable relative to said support structure along a line of travel; a plate 23 mounted to said piston rod, and moving relative to said support structure during said displacement of said piston rod 6; and an insulator 13 disposed between said support structure 200, 7 and said plate 23 for coupling said piston rod 6 to said support structure 200, 7; said insulator 13 having a first portion 201, as marked below with number 201, defining a first resistance for isolating said displacement of said piston rod and said plate during an application of a first force along said line of travel in a first direction, which at least partially compresses said first portion, and a second portion 202, as marked below with number 202, defining a second resistance with said second resistance being greater than said first resistance for controlling said displacement of said piston rod and said plate after said application of said first force and during an application of a second force along said line of travel in said first direction, wherein said second force is greater than said first force such that said first portion is compressed before the second portion is compressed, a jounce bumper 3 disposed about said piston rod 6 and mounted to said plate 23 on an opposite side from said insulator 13 for translating movement of the wheel suspension system during application of said second force. Note that first portion 101 is a thinner doughnut shape than second portion 202. Due to this structure, the first portion inherently would define a first resistance that is

Art Unit: 3683

less than a second resistance of said second portion. The structure of said insulator 13 is similar to the structure of the jounce bumper 3 wherein the resistances of the jounce bumper is explained in column 4, lines 23-54.

Re: claim 34, Tondato shows first portion 201 has a first maximum width smaller than a second maximum width of said second portion 202 to form ledge 203.

Re: claims 38 and 39, Tondato shows first cup 200 having a flange 204, said first cup 200 surrounds first portion 201; and said ledge 203 engages and compressed against said flange 204 to transmit loads to said support structure, as claimed.

Re: claims 40-42, Tondato shows a mounting assembly for a wheel suspension system of a vehicle having a vehicle body, as in the present invention, said mounting assembly comprising: a support structure 200, 7, as marked on the illustration below, for the sake of convenience, the Examiner has assigned number 200 to one member of the support structure, having an aperture and adapted to be mounted to the vehicle body; a piston rod 6 at least partially disposed within said aperture and displaceable relative to said support structure along a line of travel; a plate 23 mounted to said piston rod, and moving relative to said support structure during said displacement of said piston rod 6; and an insulator 13 disposed between said support structure 200, 7 and said plate 23 for coupling said piston rod 6 to said support structure 200, 7; said insulator 13 having a first portion 201, as marked below with number 201, defining a first resistance for isolating said displacement of said piston rod and said plate during an application of a first force along said line of travel in a first direction, which at least partially compresses said first portion, and a second portion 202, as marked below with number 202, defining

Art Unit: 3683

a second resistance with said second resistance being greater than said first resistance for controlling said displacement of said piston rod and said plate after said application of said first force and during an application of a second force along said line of travel in said first direction, wherein said second force is greater than said first force such that said first portion is compressed before the second portion is compressed, a jounce bumper 3 defining a third resistance for translating movement of the wheel suspension system during application of said second force along the line of travel in the first direction which at least partially compresses said jounce bumper in conjunction with said compression of said second portion of said insulator. Note that first portion 101 is a thinner doughnut shape than second portion 202. Due to this structure, the first portion inherently would define a first resistance that is less than a second resistance of said second portion. The structure of said insulator 13 is similar to the structure of the jounce bumper 3 wherein the resistances of the jounce bumper is explained in column 4, lines 23-54. Note also that when a second force is large enough, the jounce bumper, the first portion and the second portion would all be compressed to absorb the shock force.

Re: claim 45, Tondato shows first portion 201 having a smaller first maximum width than a second maximum width of said second portion 202 to form a ledge 203.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3683

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 33, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tondato.

Re: claims 5, 33 and 43, Tondato's mounting assembly and isolation apparatus, as rejected above, discloses that insulator 13 is made of rubber. Tondato also discloses that a micro-cellular polyurethane and a rubber are well known equivalent materials for use in elastomeric deformable elements to absorb vibration, see column 3, lines 60-62. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the insulator 13 to comprise of a micro-cellular polyurethane material instead of a rubber material since these two materials are admitted as well known equivalent materials for use in elastomeric deformable elements to absorb vibration; and are considered to be a matter of choice.

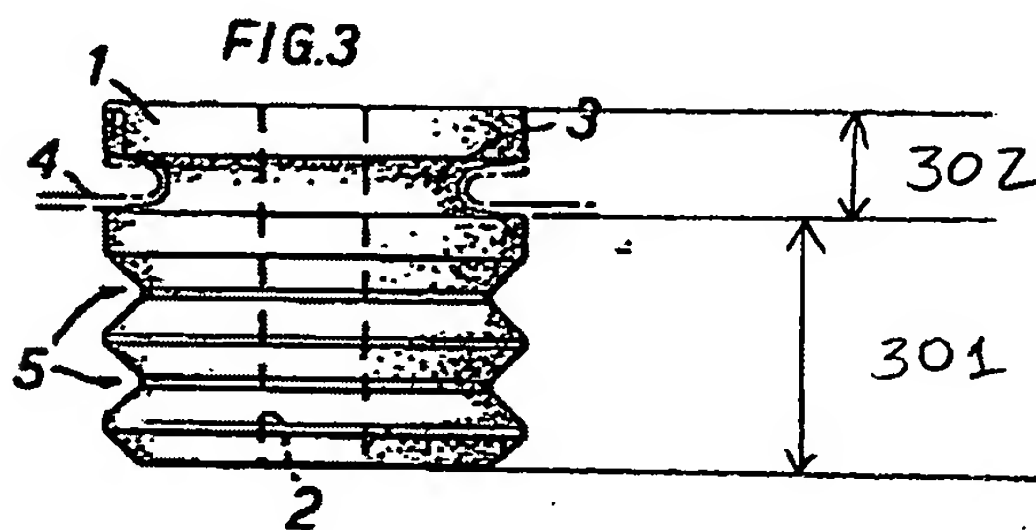
Re: claim 44, Tondato shows jounce bumper 3 to be made of an elastomeric material, rubber.

8. Claims 7, 8, 20-24, 27-30, 35, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tondato in view of Nagashima.

Re: claims 7, 8, 35, 46 and 47, Tondato's mounting assembly and isolation apparatus, as rejected above, lack the height for the first portion 201 of the insulator to be higher and to be three times as high as the height of the second portion 202. Nagashima teaches in figure 3 an insulator with the first portion 301, as marked below, to be three times as high as the second portion 302, as marked below, in order to

Art Unit: 3683

further providing gradual increase in the level of dampening. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Tondato's mounting assembly and insulator to include an insulator as taught by Nagashima wherein the height of the first portion is three times as high as the second portion in order to further provide gradual increase in the level of dampening to result in a softer ride for the passengers.



Re: claims 20, 21 and 27, Tondato shows an insulator 13 for a mounting assembly of a wheel suspension system in a vehicle having a vehicle body wherein the mounting assembly includes a support structure 200, 7 mounted to the vehicle body and a piston rod 6 displaceable relative to the support structure along a line of travel with said insulator 13 disposed adjacent the support structure for coupling the piston rod to the support structure, as in the present invention, said insulator comprising: a first portion 201 having a first maximum width and a first height, defining a first resistance for isolating the displacement of the piston rod during an application of a first force along the line of travel in a first direction, which at least partially compresses said first portion; and a second portion 202 having a second maximum width larger than said first maximum width of said first portion which defines a ledge 203 on said second portion

Art Unit: 3683

extending outwardly beyond said first maximum width of said first portion 201, wherein the second force is greater than the first force such that said first portion is compressed before the second portion is at least partially compressed during application of the second force. Tondato lacks a said second portion 202 having a second height significantly smaller than said first height of said first portion such that said first portion compresses during said application of said first force and is adapted to isolate a majority of the displacement of the piston rod along the line of travel in the first direction; said second portion 202 defining a second resistance with said second resistance being greater than said first resistance for isolating and translating a minority of the displacement of the piston rod after the application of the first force and during an application of a second force along the line of travel in the first direction; and said first height is three times higher than said second height. Nagashima teaches in figure 3 an insulator with the first portion 301, to be three times as high as the second portion 302, in order to further providing gradual increase in the level of dampening. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Tondato's mounting assembly and insulator to include an insulator as taught by Nagashima wherein the height of the first portion is three times as high as the second portion in order to further provide gradual increase in the level of dampening to result in a softer ride for the passengers.

Re: claims 22-23, Tondato shows that the first and second portions of the isolator are formed of the same homogenous material.

Art Unit: 3683

Re: claim 24, Tondato's insulator, as rejected above, discloses that insulator 13 is made of rubber. Tondato also discloses that a micro-cellular polyurethane and a rubber are well known equivalent materials for use in elastomeric deformable elements to absorb vibration, see column 3, lines 60-62. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the insulator 13 to comprise of a micro-cellular polyurethane material instead of a rubber material since these two materials are admitted as well known equivalent materials for use in elastomeric deformable elements to absorb vibration; and are considered to be a matter of choice.

Re: claims 28-30, Tondato shows the second portion has a greater width and greater circumference than those of the first portion thus forming a ledge 203 of a common homogenous material.

Allowable Subject Matter

9. Claims 12-17, 36 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lan Nguyen 9/30/04
Lan Nguyen
Patent Examiner
A. U. 3683